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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/516,337	03/01/2000	Lior Horwitz	42390.P7257	3761

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EXAMINER	
TIEU, BINH KIEN	

ART UNIT	PAPER NUMBER
2643	7

DATE MAILED: 01/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/516,337	HORWITZ ET AL.	
	Examiner	Art Unit	
	BINH K. TIEU	2643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith (U.S. Pat. #: 4,992,674).

Regarding claims 1, Smith teaches a physical layer (PHY) responsive to first and second voltage on a network medium, as shown in figures 1 and 3, comprising:

a capacitor (i.e., holding capacitor 22 as shown in figures 1 and 3);

a current source (i.e., current source 18) to charge the capacitor by conducting a transistor conduction current (col.4, lines 2-5); and

a transistor (i.e., transistor 16) to discharge the capacitor for a discharge time interval by conducting a transistor conduction current, the transistor coupled to the capacitor so that the transistor conduction current decreases in magnitude as the capacitor discharge during the discharge time interval (col.4, lines 16-21).

Regarding claims 2 and 3, note col.3, lines 36-57.

Regarding claim 4, note the current source in figures 1 and 3 as the second current source; col.4, lines 55-64.

Regarding claim 5, note transistors figure 3.

Regarding claims 6-8, note col.4, lines 16-64.

Regarding claim 9, Smith teaches an envelop detector, as shown in figures 1 and 3 to detect the envelope of a differential voltage signal, the envelope detector comprising:

a node (see node or connection between holding capacitor 22 and transistors 14 and 16 in figures 1 and 3);

a capacitor (i.e., holding capacitor 22) connected to the node, the note having the node voltage;

a first current source (i.e., current source 18) to charge the capacitor by a first conduction current indicative of the magnitude of the differential voltage signal (col.4, lines 2-5);

a transistor having a gate connected to the node (i.e., transistor 16);

a second current source (i.e., current source 20) coupled to the node; and

an output buffer coupled to the node to provide an output voltage indicative of the node voltage (see peak voltage; col.3, lines 50-57);

wherein if the output voltage crosses a threshold, the transistor and the second current source in combination are coupled to the node to discharge the capacitor (col.4, line 55 – col.5, line 5).

Regarding claim 10, note transistors figure 3.

Regarding claims 11 and 12, note figures 1 and 3; col.3, lines 36-57.

Regarding claims 13-16, note figures 1 and 3; col.4, lines 16-64.

Regarding claim 17, Smith teaches a communication system comprising:

a network medium comprising home phone wiring (i.e., single twisted wire pair in which are coupled to an operational amplifier such as operational amplifier 12 shown in figures 1 and 3, col.1, lines 13-36);

a PHY (physical layer) responsive to first and second voltage on the home phone wiring, the PHY comprising:

a node having a node voltage (see node or connection between holding capacitor 22 and transistors 14 and 16 in figures 1 and 3);

a buffer to provide an output voltage indicative of the node voltage (see peak voltage; col.3, lines 50-57);

a capacitor (i.e., holding capacitor 22) connected to the node;

a first current source (i.e., current source 18) to charge the capacitor by a first conduction current indicative of the magnitude of the difference of the first and second voltage (col.4, lines 2-5); and

a FET (i.e., transistor 16) to discharge the capacitor for a discharge time interval by conducting a drain current, the FET having a gate voltage responsive to the node voltage (col.4, lines 16-21).

Regarding claims 18-19, note col.3, line 65 - col.4, line 64.

Regarding claim 20, Smith teaches a method to communicate via home phone wiring, the method comprising:

propagating information (i.e., incoming signal containing data to be extracted) on the home phone wiring using pulse position modulation (col.1, lines 13-37 and see figures 2);

charging a capacitor with a current indicative of the full-wave rectification of a received differential voltage signal on the home phone wiring, the capacitor having a charge voltage (col.4, lines 2-5);

buffering the capacitor charge voltage to provide an output voltage (see peak voltage; col.3, lines 50-57);

discharging the capacitor if the output voltage access a threshold by conducting drain current through a FET, wherein the FET has a gate voltage responsive to the capacitor charge voltage (col.4, lines 16-21).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Smith (U.S. Pat. #: 4,866,301) also teaches an envelope detector similar to the detector in the Smith '674 applied above.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh K. Tieu whose telephone number is (703) 305-3963 and E-mail address: BINH.TIEU@USPTO.GOV.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Curtis Kuntz, can be reached on (703) 305-4708 and **IF PAPER HAS BEEN**

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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington VA, Sixth Floor (Receptionist, tel. No. 703-305-4700).

BINH TIEU
PRIMARY EXAMINER

Art Unit 2643

Date: January 21, 2004